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10/527,947	03/15/2005	Johannes Marra	NL02 0867 US	9560

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EXAMINER

ZETTL, MARY E

ART UNIT PAPER NUMBER

2875

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/527,947

Applicant(s)

MARRA, JOHANNES

Examiner

Mary Zettl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/15/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "light reflecting means that is substantially not in optical contact with the light guide (claim 3) and the "separation between said transparent surface section of said outcoupling optical elements and said specular reflecting surface of said foil widening in the direction away from the said light guide" (claim 7, lines 19-22) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 3, 4, and 7 are objected to because of the following informalities:

Regarding claims 3 and 4 it is unclear what is meant by and the difference between "substantially not in optical contact" and "in optical contact."

Regarding claim 7, it is unclear what the applicant is claiming by "separation between said transparent surface section of said outcoupling optical elements and said specular reflecting surface of said foil widening in the direction away from the said light guide" (lines 19-22). Confusion is caused because the examiner has taken the light guide (1) to extend along the horizontal and as such the widening would have to take place in the vertical direction and such a widening is not illustrated in the Figures. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-4, 6-9, 12, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

4. In the present instance, claims 2 and 6 recite the broad recitation "angle different from 0°", and the claim also recites "in particular at an angle of substantially 90°" which is the narrower statement of the range/limitation.

5. In the present instance, claim 3 recites the broad recitation "light reflecting means", and the claim also recites "in particular a structured reflective foil or a structured reflective mask" which is the narrower statement of the range/limitation.

6. In the present instance, claim 4 recites the broad recitation "light reflecting means", and the claim also recites "in particular a reflective layer" which is the narrower statement of the range/limitation.

7. In the present instance, claim 7 recites the broad recitation "light reflecting means", and the claim also recites "in particular a specular or diffuse reflector" which is the narrower statement of the range/limitation.

8. In the present instance, claim 7 recites the broad recitation "reflective surface", and the claim also recites "in particular a specularly reflecting surface" which is the narrower statement of the range/limitation.

9. In the present instance, claim 8 recites the broad recitation "light reflection means", and the claim also recites "in particular a specular or diffuse reflector" which is the narrower statement of the range/limitation.

10. In the present instance, claim 12 recites the broad recitation "light", and the claim also recites "in particular sunlight and/or light generated from external light sources" which is the narrower statement of the range/limitation.

11. In the present instance, claim 14 recites the broad recitation "display screen", and the claim also recites "in particular a LC display screen" which is the narrower statement of the range/limitation.

12. Claims 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of "and/or" renders the claims indefinite. The rejections of this action have been made using the "or" as the broadest limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

• A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-4, 6, 7 (as best interpreted), 9, 12, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Parker et al. (2002/0080598 A1).

Regarding claim 1, Parker et al. discloses a light generating device comprising a slab light guide having two substantially parallel sides and at least one edge, the edge having a surface connecting the surfaces of the sides (Figure 1), at least one light input unit arranged on at least one side of the light guide comprising at least one light source (optical deformities, item 76 act as individual light sources) and a light incoupling means (9 and 10) for coupling light into the light guide, and at least one light output unit arranged on at least one side of the light guide comprising a light outcoupling means (18) for coupling light out of one of the light guide.

Regarding claim 2, Parker et al. disclose the light incoupling means comprising a plurality of incoupling optical elements (9 and 10) being in optical contact with the surface of the at least one side of the light guide, the incoupling optical elements having a reflective surface section (15) facing the light source and being aligned substantially parallel a to the surface of a side of the light guide (interpreted in the broadest manner

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the surfaces 9 are considered *substantially* parallel to the bottom side of the light guide) and at least one transparent surface section (10) being arranged at an angle different from 0°, with respect to the surface of a side of the light guide (left side surface of item 7).

Regarding claims 3 and 4, as best understood, Parker et al. further discloses an embodiment in which the incoupling optical elements arranged in intervals and wherein between the incoupling optical elements light reflecting means (12) are arranged that are substantially not in optical contact (Figure 1C) with the light guide and another embodiment in which the incoupling optical elements are in optical contact (Figure 1) with the light guide.

Regarding claim 6, Parker et al. further disclose a light outcoupling means comprising a plurality of outcoupling optical elements (18) being in optical contact with the surface of at least one side of the light guide, the outcoupling optical elements having at least one transparent surface section being arranged at an angle different from 0°.

Regarding claim 7, Parker et al. further disclose an embodiment (Figure 2) wherein the outcoupling optical elements (10) are arranged at intervals and wherein between the outcoupling optical elements light reflecting means (9) are arranged facing away from the light guide and inclined with respect to the transparent surface section (10) of the outcoupling optical elements, the separation between the transparent surface section and the reflecting surface widening in the direction away from the light guide.

Regarding claim 9, Parker et al. further disclose, the light generating device comprising only one light input unit and/or one light output unit, wherein the light input unit and/or the light output unit extends substantially across one whole surface area of one side of the light guide (Figure 1).

Regarding claim 12, Parker et al. further disclose the light input unit further comprising a light-directing means for directing sunlight or light generated from an external source into the light input unit (BL directs light from external source, item 50 towards light input unit).

Regarding claim 14, Parker et al. further disclose the display device comprising a LC display screen (paragraph 9) and a light generating device.

Regarding claim 15, Parker et al. further disclose the light generating device comprising only one light input unit (BL and item 9 and 10) and one light output unit (18), wherein the light input unit extends substantially over the whole surface area of the side of the light guide facing away from the LC display screen (D) and wherein the light output unit extends substantially over the whole surface area of the side of the light guide facing the LC display screen, and wherein the size and geometry of the side of the light guide facing the LC display screen substantially corresponds to the size and geometry of the LC display screen (items 7 and D are aligned on the left side and the phantom lines, item 17 are parallel to D).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 5, 10, and 11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (2002/0080598 A1).

Regarding claim 5, Parker et al. teach the desire for an reflective surface section having a reflectivity of substantially 100% at the side of the reflective surface section facing away from the light guide (paragraph 5). Parker et al. do not disclose expressly this desire being realized therein. Many ways of achieving this goal, however, are well known. At the time the invention was made it would have been obvious to one of ordinary skill in the art to have modified the invention of Parker et al. such that the reflective surface section of the incoupling optical elements was diffusely reflective having a reflectivity of substantially 100% at the side of the reflective surface section facing away from the light guide in order to have prevented any light entering the light guide which was unable to propagate through the light guide by total internal reflection.

Regarding claims 10 and 11, Parker et al. teach varying the size of the optical elements in order to achieve a desired light output (paragraphs 81 and 82), however do not disclose expressly a comparison between the surface areas of the sides that are covered with light input units and the light output units. Additionally, the examiner notes

a lack of criticality of this issue in the present application as evidenced by the broad alternatives offered by claims 10 and 11. Therefore, it would have been obvious to one of ordinary skill in the art to have modified the invention of Parker et al. such that the desired light output (for example concentrated light) was achieved.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (2002/0080598 A1) in view of Masuda (US 6,796,669 B2).

Regarding claim 8, Parker et al. appear to illustrate (Figure 1a) a reflector on the side of the light guide (side with item 50), however do not label this component as such. Masuda teaches a reflecting member (12) at an edge, being substantially not in optical contact with the light guide. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have provided the invention of Parker et al. with a reflecting member as taught by Masuda such that the light source was utilized in the most efficient manner possible.

Allowable Subject Matter

16. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 13, prior art fails to teach or make obvious a light generating device with a light output unit provided with a transparent fixing means for non-

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permanently fixing the light output unit at an arbitrary position onto a side of the light guide.


Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Zettl whose telephone number is (571) 272-6007. The examiner can normally be reached on M-F 8am-4:30pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MZ


RENEE LUEBKE
PRIMARY EXAMINER